

EUROPEAN PATENT OFFICE

Patent Abstracts of Japan

PUBLICATION NUMBER : 02188432
PUBLICATION DATE : 24-07-90

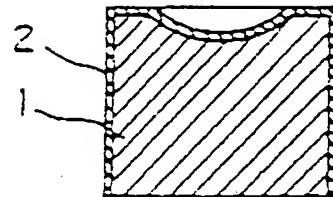
APPLICATION DATE : 13-01-89
APPLICATION NUMBER : 01004977

APPLICANT : HITACHI LTD;

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INT.CL. : C03B 11/00 B29C 33/38 // B29L 11:00

TITLE : MOLDING DIE FOR OPTICAL PARTS



ABSTRACT : PURPOSE: To prevent both oxidative deterioration of the surface of a die and melt-sticking of glass by coating the surface layer of tungsten carbide on the surface of the molding die for the optical parts which consists of sintered hard alloy incorporating tungsten carbide as a main component.

CONSTITUTION: The base material 1 of sintered hard alloy incorporating tungsten carbide as a main component is produced by adding powder of Co, etc., as a binder to tungsten carbide powder, molding and sintering this mixture. Then the face of this base material 1 used for a press is ground and worked into a recessed curved face and polished. Then the film 2 of tungsten carbide is uniformly coated on the surface by a CVD method, etc., and furthermore the surface is polished by utilizing diamond grinding granules, etc., and a molding die for the optical parts is obtained. Further as the base material 1 of the die made of sintered hard alloy, the material having $\leq 2 \times 10^{-6}/^{\circ}\text{C}$ difference of thermal expansion coefficient for the coating material 2 of tungsten carbide is preferably utilized.

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